DOCUMENT RESUME

ED 347 735 EC 301 351

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|---|---|
| TITLE | Bilingual Academics for Special Education Students (Project BASES) 1990-91. Final Evaluation Profile. OREA Report. |
| INSTITUTION | New York City Board of Education, Brooklyn, NY. Office of Research, Evaluation, and Assessment. |
| PUB DATE | 26 Jul 91 |
| CONTRACT | T003L0002 |
| NOTE | 14p.; Prepared by the Bilingual, Multicultural, and Early Childhood Evaluation Unit. |
| AVAILABLE FROM | Office of Research, Evaluation, and Assessment, New York City Public Schools, 110 Livingston St., Room 732, Brooklyn, NY 11201. |
| PUB TYPE | Reports - Evaluative/Feasibility (142) |
| EDRS PRICE | MF01/PC01 Plus Postage. |
| DESCRIPTORS | *Academic Education; *Bilingual Education; *Computer Assisted Instruction; *Emotional Disturbances; English (Second Language); Intermediate Grades; *Limited English Speaking; Native Language Instruction; Program Effectiveness; Program Evaluation; Spanish Speaking; Student Placement |
| IDENTIFIERS | New York City Board of Education; Project BASES NY |

ABSTRACT

The Bilingual Academics for Special Education Students project (Project BASES) in its first year served 76 Spanish-speaking students with limited English proficiency and emotional disturbances. The New York City Public Schools program, serving students aged 10 to 14, used an Integrative Linguistic Model to weigh students' academic and linguistic abilities for placement. The project's main feature was the integration of all subject areas around computer instruction. Computers were used to reinforce reading, writing, and mathematics skills through individualized programs, and to enhance students' social skills and self-esteem through writing, desktop publishing, and small group projects. One important limitation was the lack of funded staff. This evaluation study concludes that students received intensive instruction in English as a Second Language, Native Language Arts, and content area subjects reinforced by state-of-the-art computer software. The report discusses staffing, project implementation, and outcomes by individual objectives. An appendix describes data collection and analysis procedures. (JDD)

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# OREA Report

Bilingual Academics for Special Education Students
(Project BASES)
Grant Number: T003L0002
1990-91

FINAL EVALUATION PROFILE

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Bilingual Academics for Special Education Students
(Project BASES)
Grant Number: T003L0002
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FINAL EVALUATION PROFILE

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7/28/91



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## ACKNOWLEDGMENTS

This report has been prepared by the Bilingual, Multicultural, and Early Childhood Evaluation Unit of the Office of Research, Evaluation, and Assessment.

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## FOREWORD

The body of this report is preceded by an Extract which presents an overview of salient points of the project: funding cycle; enrollment figures; background of students served; admission criteria; and programming features, strengths, and limitations, including the outcome of all objectives. The extract also presents the conclusions drawn by the Office of Research, Evaluation, and Assessment (OREA) about the program and its recommendations for program improvement.

The extract is followed by the body of the report, titled Program Assessment. This includes such information as staffing, program implementation, and outcome and implementation objectives. Instructional objectives are presented first, followed by noninstructional objectives. The report then addresses those aspects of programming mandated by Title VII regulations that do not have specifically stated objectives. This may be information on attendance and dropout rate, grade retention, mainstreaming, referrals out of the program to meet special needs of the students, and withdrawals. A case history concludes the report.

Data for this profile were collected and analyzed using a variety of procedures, which are described in Appendix A following the text.

Office of Research, Evaluation, and Assessment
New York City Public Schools

E.S.E.A. Title VII Evaluation Profile

# Bilingual Academics for Special Education Students (Project BASES)

Grant Number: T003100023
1990-91

**EXTRACT**

PROJECT DIRECTOR: Betty Rosa

FUNDING CYCLE: Year 1 of 3

SITES

| School | Community School District | Grade Levels | Enrollment |
|---|---|---|---|
| P.S. 53M | 75 | 2-9 | 76 |

STUDENT BACKGROUND

| Native Language | Number of Students |
|---|---|
| Spanish | 76 |

| Countries of Origin | Number of Students |
|---|---|
| United States | 53 |
| Dominican Republic | 18 |
| Puerto Rico | 5 |

Mean Years of Education in Native Country: 0.6; in the United States: 6.5

Percentage of Students Eligible for Free Lunch Program: 67.1

ADMISSION CRITERIA

Project students were Spanish speakers of limited English proficiency (LEP), ages 10.9 to 14.9 and classified as SIE VII. (Specialized Instructional Environment VII is an educational service option designed for students with severe emotional disturbances, ages 4.9 to 21.)

PROGRAMMING

Features

The Bilingual Academics for Special Education Students (Project BASES) was housed in P.S.53, the Multilingual/Multicultural School which provides educational opportunities to special education LEP students and monolingual students in need of a highly structured environment. The school uses an Integrative Linguistic Model (I.L.M.) to weigh students' academic and linguistic abilities for placement. The project's main feature was the integration of all subject areas around computer instruction. Additional components included staff development and parental involvement activities.

Strengths and Limitations

Project staff rated computer instruction as the strongest component of the project. Computers were used for two distinct purposes: to reinforce reading, writing, and mathematics skills through an individualized program, and to enhance students social skills and self-esteem through writing, desktop publishing, and small group projects.

One important limitation was the lack of staff funded by the project, which only paid for one paraprofessional. Other staff had responsibilities beyond the project, especially the project director who was the principal of the school. Additionally, project students would have benefited from having more bilingual teachers in the school.

## CONCLUSIONS AND RECOMMENDATIONS

Project BASES was fully implemented. Students with special education needs received intensive instruction in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), and content area subjects reinforced by state-of-the-art computer software.

The project met its objectives to provide all mandated services and the objectives for staff development. It met one of three objectives for E.S.L. It did not meet its objective for content area subjects or parental involvement. The project did not provide data for OREA to evaluate the objective for N.L.A.

The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- The project should provide the data necessary to evaluate all objectives.
- A position of project director or project coordinator should be built into the budget to facilitate and enhance coordination and planning.
- The project should identify ways in which to meet the objectives for E.S.L., and the content area subjects.

## PROGRAM ASSESSMENT

STAFFING

Title VII Staff (Total 1)

| Title | Degree | Language Competencies | Funding |
|---|---|---|---|
| Paraprofessional | High School | Spanish | Full time |

Other Staff Working with Project Students (Total 20)

Teachers held licenses in Common Branches (1), Bilingual Common Branches (3), Special Education (5), Bilingual Special Education (5), Bilingual Social Studies (1), Health Education (2), Orchestral Music (1), Mechanical Drawing (1), and Speech (1). There was also a guidance counselor and a bilingual school psychologist.

IMPLEMENTATION AND OUTCOMES (Objectives prefaced by •)

English as a Second Language (E.S.L.)

The number of E.S.L. periods per day reflected Individual Education Plans (I.E.P.s). Students averaged about eight periods weekly, some of them in the computer lab. E.S.L. materials reflected current research, incorporating opportunities for language development through the total physical response methodology and the natural language approach.

- Project BASES students will have improved in English language proficiency compared to a non-equivalent control group as measured by the Language Assessment Battery (LAB).

Evaluation Instrument: Language Assessment Battery (LAB)*

Pretest: March 1990; posttest: March 1991.

Number of students for whom pre- and posttest data were reported: 23

Mean gain: 8.8 N.C.E.s (s.d.= 14.9)

Mean gain is statistically significant ($t = 2.83$, $p < .05$).

**Project met objective.**

- Project BASES students will have demonstrated statistically significant gains in reading achievement compared to a non-equivalent control group as measured by the posttest scores on the Degrees of Reading Power Test.

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*OREA used a gap reduction design to evaluate the effect of supplementary instruction on project students' performance on the LAB. Since all LEP students in New York City are entitled to such instruction, no valid comparison group exists among these students, and OREA used instead the group on which the LAB was normed. Test scores are reported in Normal Curve Equivalents (N.C.E.s), which are normalized standard scores with a mean of 50 and a standard deviation of 21.06. It is assumed that the norm group has a zero gain in N.C.E.s in the absence of supplementary instruction and that participating students' gains are attributable to project services.

Evaluation Instrument: Degrees of Reading Power (D.R.P.).

Number of students for whom pre- and posttest data were reported: 33

Mean gain: 0.3 N.C.E.s (s.d.= 12.7)

Mean gain is not statistically significant (t= 0.15).

**Project did not meet objective.**

- A greater percent of Project BASES students will have met the exit criteria for bilingual programs compared to a non-equivalent control group as measured by the posttest Language Assessment Battery scores and the School-Based Support Team recommendation.

None of the project students scored over the 40th percentile on the LAB, the exit criterion.

**Project did not meet objective.**

Native Language Arts (N.L.A.)

Estimated percentage of students lacking literacy skills in native language: 75

Spanish as a Foreign Language was taught separately to native speakers for three periods a week. These classes built students' grammar while introducing them to Spanish literature. Materials selected incorporated regional differences in the native language and presented relevant cultural experiences.

- Eighty percent of the Project BASES students will have made statistically significant gains in Spanish language arts as measured by an objective, standardized language achievement test.

Evaluation Instrument: Language Assessment Battery (Spanish version)

No pre-/post matching data were available for project students.

**OREA could not evaluate this objective.**

Content Area Subjects

Subject areas were taught in Spanish, English, or English with an E.S.L. approach.

- Project BASES students will have demonstrated statistically significant gains in mathematics achievement compared to a non-equivalent control group as measured by the posttest scores on the Metropolitan Achievement Test.

Evaluation Instrument: Metropolitan Achievement Test (MAT)

Number of students for whom pre- and posttest data were reported: 30

Mean gain: 0.7 N.C.E.s (s.d.= 9.6)

Mean gain is not statistically significant (t= 0.40).

**Project did not meet objective.**

Mandated Services

- By June 1991, Project BASES students will have received the program elements (pertaining to their grade level and/or adapted form) mandated by New York State Commissioner's Regulations, Part 100 and 200.6, as measured by a review of students' instructional schedules, and principal and teacher interviews.

According to project records, students received all program elements mandated by New York State Commissioners of Education's Regulations.

**Project met objective.**

- By June 1991, Project BASES students will have received the appropriate bilingual/E.S.L. program prescribed by the Consent Decree and/or S.B.S.T. recommendations measured by a review of students' instructional schedules, and principal and teacher interviews.

Project BASES students received the required elements of the Consent decree program: intensive E.S.L. instruction; Native Language Arts; and the content areas of mathematics, science, and social studies in the native language.

**Project met objective.**

Attendance

Students' attendance rate was 77.2 percent.

No objective was proposed for attendance

Dropout

No students dropped out.

No objective was proposed in this area.

Staff Development

- Eighty percent of Project BASES teachers and paraprofessionals will have attended a minimum of ten training sessions on topics related to student assessment, special education regulations, bilingual education program requirements, use of instructional materials, and pedagogical techniques, as measured by a review of agendas, evaluation forms, and attendance records.

The entire staff received training on restructuring, school-based management, and shared decision-making. Teachers and paraprofessionals were given the opportunity to increase their classroom management skills through participation in a variety of workshops and professional development courses. For new teachers and paraprofessionals, special attention was given to the administrative aspects of the special education process; This training component included the development and updating of I.E.P.s and information on particular behavior and learning modalities of emotionally handicapped students. Staff also received training on second language learning methods and in specific teaching strategies and their application to a multiple level special education classroom.

**Project met objective.**

- Seventy percent of Project BASES teachers and paraprofessionals will have completed a minimum of six graduate credits as measured by a review of college transcripts and staff interviews.

The school facilitated staff participation in graduate courses leading to certification. Most staff members took courses related to special education.

**Project met objective.**

Parental Involvement

- Seventy percent of the parents of Project Bases students will have attended a minimum of ten orientation/training sessions related to special education resources, bilingual education, instructional/behavior pattern carryover in the home, and improving students' educational needs/programs as measured by a review of agendas, evaluation forms and attendance records.

The project and school made every effort to reach out to parents. The school hired a bilingual psychologist for parent counseling, and there were numerous communications to inform parents of outside services. The school also offered a variety of workshops on parenting issues. Several field trips and other recreational activities were planned to involve parents. Parental attendance at school activities, however, was not as high as expected.

**Project did not meet objective.**

- Seventy percent of the parents of Project Bases students will have attended sessions leading to improved skills through Adult Basic Education, English as a Second Language, or General Education Diploma programs as measured by attendance records and parent interviews.

Parents were given the opportunity to participate in general adult education and E.S.L. programs, including courses leading to a high school diploma. Enrollment in these programs was lower than projected.

**Project did not meet objective.**

Other Activities

A distinctive characteristic of this project was the use of computers to assist instruction. Every student was scheduled to attend the computer lab at least three periods a week for a variety of activities and learning experiences. Computer-assisted instruction incorporated the use of the Josten System into the reading and mathematics curricula. This feature allowed for individualized programs, which included training in specific skills and were based on students' I.E.P.s and recommendations of the classroom teacher. The computer kept track of each student's response to every lesson; when the responses showed a lack of understanding, the lesson demonstrated the concept in a different way. To promote writing skills, students were introduced to word processing using the Josten System, the Bank Street System, and Talking Text Writer. Students wrote essays and poetry and practiced desktop publishing. A peer tutoring approach allowed second language development by pairing Spanish-speaking with English-speaking students. Computers were also used to enrich social studies and science curricula by providing additional stimulation and reinforcing specific skills.

## MAINSTREAMING AND RETENTIONS IN GRADE

Nine students (2.1 percent of participants) were mainstreamed, 110 students graduated, and 12 were retained in grade. No students dropped out.

### Academic Achievement of Former Project Students in Mainstream

Since this was the first year of funding for Project BASES, no data were available for any former project students.

## CASE HISTORY

The project did not provide a case history.

## APPENDIX A

## DATA COLLECTION AND ANALYSIS

### Student Data Form

This one-page form is filled out by staff for each participating and mainstreamed student. OREA gathers data from this form on backgrounds, demographics, academic outcomes, attendance, referrals, and exit from the program.

### Project Director's Questionnaire

The Project Director's Questionnaire includes questions on staff qualifications, program implementation, periods of instruction, and instructional materials and techniques.

### Project Director's Interview

The interview gathers information on program and student or staff characteristics not supplied by the Project Director's Questionnaire. The interview also allows project staff to offer qualitative data or amplify responses to the Questionnaire.

### Citywide Test Scores

OREA retrieves scores centrally from the Language Assessment Battery (LAB) and other citywide tests. For evaluation purposes, these test scores are reported in Normal Curve Equivalents (N.C.E.s). N.C.E.s are normalized standard scores with a mean of 50 and a standard deviation (s.d.) of 21.06. They constitute an equal-interval scale in which the distance is the same between any two adjacent scores. A gain of 5 N.C.E.s is the same whether it is at the lower or the higher end of the scale. N.C.E.s can be used in arithmetic computations to indicate group progress. (Percentile scales, although more familiar to many, are unsuitable for such computations since they are not equal-interval.)

### Likert-Type Surveys

Likert-type surveys, in which respondents mark their opinions on a scale from one to five, are used in a variety of ways. They examine student attitudes (i.e., toward school and career, native language use, and native and mainstream cultures). They also assess staff and parent attitude and reactions to workshops and other activities.

### Gap Reduction Evaluation Design

OREA uses a gap reduction design for measuring changes in standardized tests. Since no appropriate non-project comparison group is available in New York City, where all students of limited English proficiency (LEP) are entitled to receive supplementary services, OREA compares the progress of participating students with that of the group on which the test was normed. It is assumed that the norm group would show a zero gain in the absence of instruction, and gains made by project students could be attributed to project services. (See "Citywide Test Scores" above.)

To test whether pre/posttest gains are greater than could be expected by chance alone, OREA uses a *t*-test. To determine whether a difference between two proportions (e.g., program and mainstream attendance rates) is greater than could be expected by chance, OREA uses a *z*-test. The level of significance is set at .05 for all tests.